

**TABLE M.5.2.13.2–2.— National Ignition Facility Estimated Important Chemical Inventories**

Chemical	Source	Quantity	Exposure Criteria <sup>a</sup>
Acetone	Cleaners, etc.	210 L (165 kg) + OAB 13 L (10 kg)	500 mg/m <sup>3</sup> (ACGIH)
Alcohol, ethyl (ethanol)	Cleaners, etc.	276 L (258 kg) + OAB 10.7 L (10 kg)	1,000 mg/m <sup>3</sup> (ACGIH)
Alcohol, isopropyl	Cleaners, etc.	20.5 L (16.2 kg) + OAB 25.3 L (20 kg) 10 kg (wipes)	400 mg/m <sup>3</sup> (ACGIH)
Argon	Beam tubes	10,100 kg	—
Castor oil (ricinus oil)	Dielectric fluid in capacitors	227,000 L	—
Chloroform	Cleaners, etc.	0.5 L (0.7 kg)	10 mg/m <sup>3</sup> (ACGIH)
Decontamination Acid Bath	First wall	8000 L (10624 kg),	5.2 mg/m <sup>3</sup> HNO <sub>3</sub>
Nitric acid + phosphoric acid (1 M each)	decontamination	2520 kg as HNO <sub>3</sub> , 3920 kg as H <sub>3</sub> PO <sub>4</sub>	(ACGIH) 1 mg/m <sup>3</sup> H <sub>3</sub> PO <sub>4</sub> (ACGIH)
Ethylene glycol	PAM coolant	170 kg	127 mg/m <sup>3</sup> (ACGIH)
Mercury, metallic	192 PAM switches	3.5 L <sup>b</sup> (47 kg)	0.025 mg/m <sup>3</sup> (ACGIH)
Methylene chloride	Cleaners, etc.	1 L (1.32 kg)	174 mg/m <sup>3</sup> (ACGIH)
Nitric acid (70% solution)	Supply on hand for replenishing decontamination solution	400 L (540 kg), 420 kg as HNO <sub>3</sub>	5.2 mg/m <sup>3</sup> (ACGIH)
Nitrogen	Cleaning propellant, dry box purging, beam tubes, amplifier cooling, cryogen	96,000 kg	—
Phosphoric acid (87% solution)	Supply on hand for replenishing decontamination solution	400 L (691 kg), 639 kg as H <sub>3</sub> PO <sub>4</sub>	1 mg/m <sup>3</sup> (ACGIH)
Sodium hydroxide (1 M)	Decontamination (caustic bath)	8000 L (8320 kg), 1600 kg as NaOH	2 mg/m <sup>3</sup> (ACGIH)
Sodium hydroxide (50% solution)	Supply on hand for replenishing decontamination solution	400 L (612 kg), 306 kg as NaOH	2 mg/m <sup>3</sup> (ACGIH)
Toluene	Cleaners, etc.	18 L (16 kg)	375 mg/m <sup>3</sup> (NIOSH)
Xylene	Cleaners, etc.	18 L (16 kg)	435 mg/m <sup>3</sup> (NIOSH)

Source: LLNL 2003d.

<sup>a</sup> All criteria are 8-hour time weighted averages, unless otherwise stated.<sup>b</sup> Single ignitron inventories are approximately 14 pounds (0.125 gallons).ACGIH = American Conference of Governmental Industrial Hygienists; H<sub>3</sub>PO<sub>4</sub> = phosphoric acid; HNO<sub>3</sub> = nitric acid; kg = kilogram; L = liter; M = molar; NaOH = sodium hydroxide; NIOSH = National Institute of Occupational Safety and Health; OAB = optics assembly building; PAM = preamplified module.